

# **FOLDING COLLAPSIBLE COMBINATION RACK**

## **BACKGROUND OF THE INVENTION**

### **1. Field of the Invention**

5           The present invention relates generally to storage racks for home use and, more specifically, to a folding collapsible combination rack.

### **2. Description of the Related Art**

          In order to hold daily consumer goods or other kinds of bottles, for example, shampoo, bath gel, etc. in the bathroom, a rack may be used and installed on the wall  
10   in the bathroom for holding these articles. There are known combination racks for this purpose. These combination racks have two or three racks arranged in one set. When a rack or combination rack installed on the wall, it protrudes from the wall at a distance, i.e. it occupies too much space.

## **SUMMARY OF THE INVENTION**

15           The present invention has been accomplished under the circumstances in view. It is the main object of the present invention to provide a combination rack for holding things in the bathroom or the like, which is folding collapsible.

          To achieve the foregoing object of the present invention, the folding collapsible combination rack includes a mounting frame formed of a metal wire rod for  
20   fastening to the wall, the mounting frame including two retaining device, the retaining devices each including two metal retaining blocks symmetrically disposed at two sides, the metal retaining blocks each having a rounded surface; and two racks respectively formed of a metal wire rod and respectively pivoted to the mounting frame corresponding to the retaining device, the racks each including two parallel side rods  
25   pivoted to the mounting frame for enabling the respective rack to be turned relative to

the mounting frame between a horizontal position and a vertical position, and a bearing frame suspended from the side rods at a bottom side for holding storage items, the side rods of the rack being respectively forced into engagement with the metal retaining blocks of the retaining device of the mounting frame when the rack turned to the  
5 vertical position.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

FIG. 1 is a perspective view of a folding collapsible combination rack constructed according to a first preferred embodiment of the present invention set in an operative position.

10 FIG. 2 is an elevational view of the folding collapsible combination rack shown in FIG. 1.

FIG. 3 is a right view of the folding collapsible combination rack shown in FIG. 1.

FIG. 4 is a top view of the folding collapsible combination rack shown in  
15 FIG. 1.

FIG. 5 is a right view of the first embodiment of the present invention, showing that the racks of the folding collapsible combination rack are set in a non-operative position.

FIG. 6 is a sectional view taken along a line 6-6 of FIG. 5.

20 FIG. 7 is an elevational view of a folding collapsible combination rack constructed according to a second preferred embodiment of the present invention.

FIG. 8 is a sectional view taken along a line 8-8 of FIG. 7.

FIG. 9 is a partial enlarged view of the second embodiment of the present invention, showing that the rack is being turned from the operative position to the  
25 non-operative position.

## DETAILED DESCRIPTION OF THE INVENTION

Referring to FIGS. 1-4, a folding collapsible combination rack **10** is accordance with the first embodiment of the present invention is shown comprised of a mounting frame **11** and two racks **20**.

5           The mounting frame **11** is made from a metal wire rod by bending and welding, including a mounting base **12** substantially shaped like a rectangular open frame having two mounting holes **13** respectively formed in the two opposite short sides on the middle through which fastening members are fastened to the wall to fix the mounting frame **11** to the wall in such a position that the two opposite long sides of  
10 the mounting base **12** are vertically aligned with the floor, two substantially U-shaped support arms **14** respectively fixedly fastened to the mounting base **12** at the front side at different elevations, the support arms **14** each having two vertical arm portions **15** respectively downwardly disposed in parallel at two sides and two horizontal bearing tips **17** respectively extended from the vertical arm portions **15** at the bottom side in  
15 direction perpendicular to the wall to which the mounting base **12** is fastened and then turned at right angles toward each other, a plurality of eyelets **16** respectively located on the connections between the vertical arm portions **15** and horizontal bearing tips **17** of each of the support arms **14**, and two retaining devices **18** respectively provided at the support arms **14**. According to this embodiment, each retaining device **18** includes  
20 two spherical retaining blocks **19** respectively welded to the vertical arm portions **15** of the corresponding support arm **14** at the front side.

          The racks **20** are respectively made from a metal wire rod by bending and welding, each including two parallel side rods **21**, and a bearing frame **22** suspended from the side rods **21** for holding storage items. The parallel side rods **21** each have a  
25 rear end respectively turned outwards at right angles and terminating in a pivot tip **23**.

The pivot tips 23 of the side rods 21 of the racks 20 are respectively inserted into the eyelets 16 of the support arms 14 of the mounting frame 11, for enabling the side rods 21 to be respectively supported on the horizontal bearing tips 17 of each of the support arms 14 of the mounting frame 11.

5           When assembled, the racks 20 can be turned relative to the mounting frame 11 between the operative (horizontal) position where the side rods 21 of the racks 20 are respectively supported on the horizontal bearing tips 17 of the support arms 14 of the mounting frame 11 (see FIG. 3), or the non-operative (vertical) position where the side rods 21 of the racks 20 are moved away from the horizontal bearing tips 17 of the support arms 14 of the mounting frame 11 and closely attached to the horizontal middle sections of the support arms 14 between the vertical arm portions 15 of each of the support arms 14 (see FIGS. 5 and 6). When the racks 20 set in the operative position, they protrude from the wall at a distance longer than the width thereof. However, when the racks 20 set in the non-operative position, they protrude from the wall at a distance shorter than the width thereof (the height of the racks 20 is shorter than the width of the racks 20). Further, when the racks 20 are turned from the operative position to the non-operative position, the side rods 21 are respectively forced into engagement with the spherical retaining blocks 19 of the mounting frame 11 like the functioning of a knob closure (see FIGS. 5 and 6). Therefore, the racks 20 will not fall while in the non-operative position.

FIGS. 7-9 show a folding collapsible combination rack 30 constructed in accordance with a second embodiment of the present invention. Similar to the aforementioned first embodiment of the present invention, the folding collapsible combination rack 30 is composed of a mounting frame 31, two racks 32. The mounting frame 31 includes a mounting base 33 fixedly fastened to the wall, two support arms

34 respectively fixedly fastened to the front side of the mounting base 33, two pairs of eyelets 35 respectively bilaterally provided at the support arms 34, and two retaining devices 36 respectively provided at the support arms 34. According to this embodiment, each retaining device 36 includes two semispherical retaining blocks 37, respectively  
5 located on the periphery of the eyelets 35 of the respective support arm 34 and facing to each other. The racks 32 each include two parallel side rods 38 respectively pivoted to the eyelets 35 of the mounting frame 31, and a bearing frame 39 suspended from the side rods 38 for holding storage items. When installed, the racks 32 can be alternatively set between the operative (horizontal) position and the non-operative  
10 (vertical) position. When the racks 32 is set in the non-operative position, the side rods 38 are respectively forced into engagement with the semispherical retaining blocks 37 of the retaining devices 36 of the mounting frame 31.